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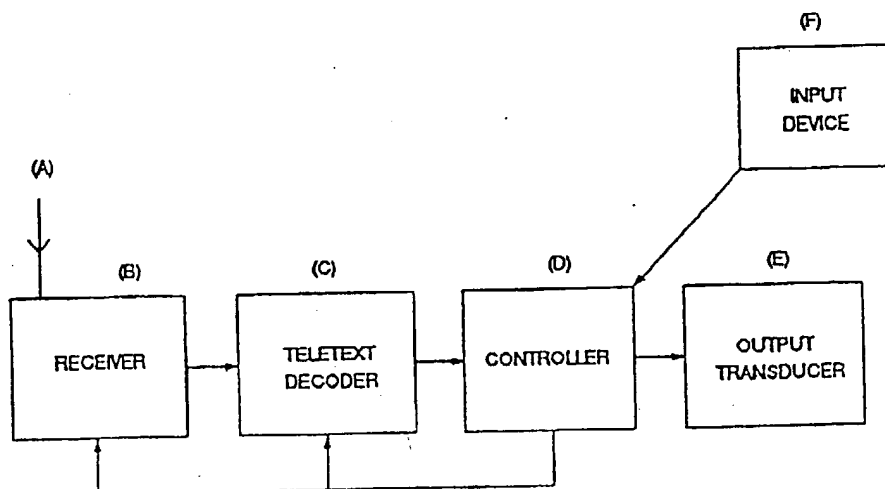
(52) UK CL (Edition K)
H4T TDAA T121

(56) Documents cited
GB 2235111 A US 4700322 A
Conference Title - Computers for handicapped persons, Austria 1989, "The automatic translation system of teletext data for the blind using a personal computer", pp 406-412
Microprocessors and microsystems, Vol 10 No 10, Dec. 1986, pp 553-556
Conference Title - International conference on man/machine systems, UK, 1982, "Conversion of teletext and viewdata into Braille", pp 196-200
Conference Title - Second international conference on microprocessors in automation and communications, UK, 1981, "Teletext and viewdata for the blind", pp 161-170

(58) Field of search
UK CL (Edition K) H4T TDAA
INT CL⁵ G09B, H04N
Online databases: WPI, INSPEC, CLAIMS

(54) Adapting teletext information for the blind

(57) Textual information broadcast as part of a national teletext service is transformed into a form more readily understood by a visually handicapped person, e.g. Braille or speech using a speech synthesiser.

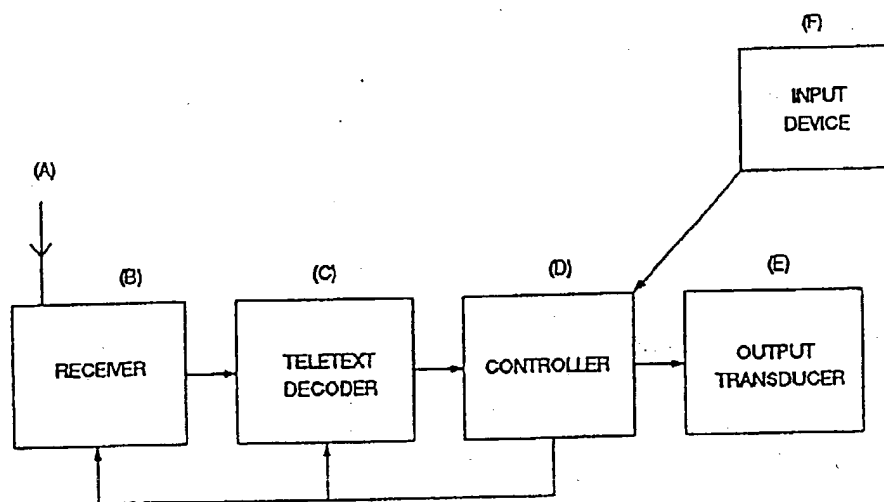


At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.
The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

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ADAPTING TEXTUAL INFORMATION

5 This invention relates to a system for adapting textual information broadcast as part of a national teletext service for access by the visually handicapped.

10 In the United Kingdom at the present time two major broadcasters transmit teletext information as a service along with audio and visual signals, namely the BBC with the CEEFAX service and ITV with the ORACLE service.

15 The service provided by teletext is quite widespread and varied, with pages of information being made available on subjects such as the national news, local weather, recipes, share prices and the like. The teletext service also allows pictures to be built up and displayed on television screens.

20 According to our invention a system for adapting textual information broadcast as part of a national teletext service for access by the visually handicapped comprises a controller adapted to convert teletext information taken as an input to a format which can be
25 used to drive an output transducer directly.

30 This enables a visually handicapped person to "read" the teletext information from the output transducer.

Where used herein the term "read" is intended to cover the whole human aspect of understanding information that is external to the body.

35 Conveniently the controller is adapted to accept teletext information from either a standard or custom

built receiver circuit and a decoder circuit and to accept commands from an input device, suitably a keyboard, and the controller is then adapted to issue control signals to the output transducer and also back to the receiver and decoder circuits.

The output transducer may comprise any convenient device, suitably a speech synthesiser, a Braille printer, or a Braille pad.

One embodiment of our invention is illustrated in single Figure of the accompanying drawings which is a layout of a system for adapting textual information broadcast as part of a national teletext service for access by the visually handicapped.

In the system illustrated in the drawings television signals are received via aerial (A) by receiving circuits (B). Teletext information is extracted from the received signals by the decoder circuitry (C) and passed to a controller (D). The purpose of the controller, which will normally be microprocessor based, is to convert the teletext information into a format that can directly be used by an output transducer (E). An input device (F), which will generally be a keyboard or keypad, allows commands to be passed on to the controller (D). The visually handicapped person can "read" the teletext information from the output transducer (E) in accordance with commands from the input device (F).

The output transducer (E) may comprise a speech synthesiser, a Braille printer, or a Braille pad.

When the transducer comprises a speech synthesiser, it is preferably of the unlimited

vocabulary type and will allow text to be spoken aloud in a readily understandable manner.

5 When the transducer comprises a Braille printer it is arranged to print the textual information on paper in the Braille format. This enables the paper to be read by touch.

10 When the transducer comprises a Braille pad such an electro-mechanical device presents the textual information one character at a time. Each character is in the Braille format and is presented as a cluster of raised 'pips' on a flat pad.

15 Commands that can be given to the controller (D) will include such items as the teletext page that is to be selected, display commands, e.g. 'freeze pages', frequency of character presentation, volume, channel selection and so on.

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The whole system can be housed together in one container or as separate units.

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CLAIMS

1. A system for adapting textual information broadcast as part of a national teletext service for access by the visually handicapped comprising a controller adapted to convert teletext information taken as input to a format which can be used to drive an output transducer directly.
2. A system according to claim 1, in which the controller is adapted to accept teletext information from either a standard or custom built receiver circuit and a decoder circuit and to accept commands from an input device, and the controller is then adapted to issue control signals to the output transducer and also back to the receiver and decoder circuits.
3. A system according to claim 2, in which the input device is a keyboard or keypad.
4. A system according to any preceding claim, in which the output transducer comprises a speech synthesiser.
5. A system according to claim 4, in which the speech synthesiser is of the unlimited vocabulary type.
6. A system according to any of claims 1 to 3, in which the output transducer comprises a Braille printer or a Braille pad.
7. A system according to any previous claim, in which the system is housed in one container or as separate units.

8. A system for adapting textual information broadcast as part of a national teletext service for access by the visually handicapped substantially as described herein with reference to and as illustrated in the accompanying drawings.

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